National Biomonitoring Program

WHAT IS THE PUBLIC HEALTH ISSUE?

- Limited information exists about which environmental chemicals to which people are actually exposed, how much of these chemicals gets into people's bodies, and what effects these exposures have on people's health.
- Without this information, public health officials cannot effectively identify and prevent diseases that result from environmental exposures.

WHAT HAS CDC ACCOMPLISHED?

- CDC established the National Biomonitoring Program (NBP), which specializes in biomonitoring, the direct measurement of people's exposure to environmental chemicals by measuring the chemicals in human specimens such as blood or urine. Biomonitoring measurements are the most health-relevant assessments of exposure because they measure the amount of a chemical that *actually* gets into people from all environmental sources combined, not the amount that may get into people.
- NBP has developed analytic methods to measure about 350 environmental chemicals in blood and urine. The methods have been published in the peer-reviewed literature so that other laboratories can use them. NBP also has assisted state public health laboratories in implementing these methods.
- Every two years, NBP assesses the exposure of the general U.S. population to environmental chemicals. Data are published in CDC's *National Report on Human Exposure to Environmental Chemicals* (www.cdc.gov/exposurereport). One finding from the *Report* shows that elevated blood lead levels among America's children continue to decline- from 4.4% in the early 1990s to 1.6% by the end of 2002. However, children who live in older housing that contains lead-based paint or lead-contaminated dust are still at increased risk for lead poisoning.
- NBP conducts exposure investigations using biomonitoring to determine exposure levels for special population groups at risk for high exposure. NBP measurements help quantify how much exposure has occurred and what appropriate public health action is indicated to reduce exposure.
- NBP collaborates on multiple studies each year that examine health risks associated with people's exposure to varying levels of chemicals. Human toxicity varies with dose—and studies are needed to characterize which doses are safe and which lead to disease.
- NBP also collaborates on studies examining potential public health interventions and how well they work. CDC will develop methods to measure more toxic substances and will continue to assist state public health laboratories in implementing these methods.

WHAT ARE THE NEXT STEPS?

CDC will expand its biomonitoring efforts to measure more priority environmental chemicals and will continue to study these chemicals and their effects on people's health.